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BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the Matter of	)	
	)	
Deployment of Wireline Services Offering	)	CC Docket No. 98-147
Advanced Telecommunications Capability	)	

REPLY COMMENTS OF SPRINT CORPORATION

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SUMMARY

The opponents of line-sharing have not made their case. Requiring line-sharing as a UNE is fully consistent with the statutory definition of a "network element" and with the Commission's determination to make other shared facilities available as UNEs. Clearly, so long as an ILEC is able to offer both analog voice and packetized services over the same loop, CLECs offering packetized services will be materially impaired if they have to buy a separate loop for their service.

The very fact that ILECs are engaging in internal line-sharing for their ADSL services today demonstrates that it is technically feasible. The fact that it may not be feasible for use on all loops or with all technologies is no reason to avoid requiring ILECs to make it available under the same circumstances where they employ it themselves. Although line-sharing does pose legitimate administrative and operational complexities, the solution is to give ILECs a reasonable period of time (e.g., one year) to develop the necessary procedures and make needed modifications to back office systems.

The RBOCs' "policy" arguments against line-sharing are without merit. Line-sharing would promote competition and innovation, not deter it as the RBOCs argue. On the contrary, as long as the ILECs utilize line-sharing for their own data services, the failure to make it available to other carriers will artificially dampen their ability to compete.

Inasmuch as the ILECs themselves allocate no loop costs to their line-shared data services, no loop costs should be assigned to the shared-loop UNE. Accepting the

ILECs' own treatment of this cost allocation issue avoids implicating local service pricing, access charges and universal service mechanisms.

The blatantly protectionist requests to limit line-sharing to residential customers and to prohibit packetized voice services from being offered over shared loops are antithetical to the Act and to competition, and should be rejected.

With respect to spectrum compatibility issues, new technologies must be tested and industry standards must be developed, before deployment is allowed on a widespread basis. The ILECs' deployment practices should be subject to national standards to ensure fair consideration of competitors' new technologies and nondiscriminatory implementation. The Commission should rely on T1E1.4 to develop technical standards and should form an ad hoc industry group to develop spectrum management policies.

Sprint supports binder group management, particularly in the feeder cable closest to the central office, as the best approach to spectrum management. However, binder group management must be fair and competitively neutral. Thus, the ad hoc body referred to above should develop national standards for binder group management.

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Sprint Corporation hereby replies to comments of other parties on the issues of spectrum compatibility and line-sharing, raised in the First Report and Order and Further Notice of Proposed Rulemaking released in this proceeding on March 31, 1999 (FCC 99-48) (Further Notice).

I. LINE-SHARING

The Commission's proposal to require ILECs that offer analog voice service and xDSL service on the same loop to unbundle access to the above-voice frequencies of a loop garnered widespread support, but was opposed by the major ILECs (other than Sprint) and AT&T (but on narrower grounds than the ILECs). The principal arguments raised against line-sharing are:

- The unbundled spectrum does not meet the statutory definition of "network element."
- The absence of such an element would not "impair" the requesting carrier's ability to provide its services, since advanced services can be provided by purchasing the entire loop as a UNE.
- Line-sharing is not technically feasible.
- Line-sharing creates a host of operational and administrative complexities.
- Line-sharing would discourage innovation and investment.

As will be discussed below, line-sharing promises to bring substantial benefits and economies to consumers. The objections raised by the opponents of line-sharing are either without merit or do not constitute unsolvable roadblocks to its implementation.

A. Unbundled Loop Spectrum is Consistent with the Definition of a "Network Element."

Some opponents of line-sharing argue that under the statutory definition of "network element" in §3(29) of the Act, only an entire facility, and not a portion of the capacity of that facility, can be considered a network element.[1] This is clearly incorrect. The statutory definition is not confined just to "a facility or equipment used in the provision of a telecommunications service." Instead, under the statutory definition, "[s]uch term also includes features, functions, and capabilities that are provided by means of such facility or equipment... ." Clearly the ability to convey higher frequency signals constitutes a "function" or a "capability" of the copper wire "facility," and thus fully satisfies the statutory definition. And the Commission has applied the same concept to defining what network elements must be unbundled in the Local Competition Order.[2] For example, the Commission required the unbundling of a variety of transmission capabilities for interoffice transmission, including DS1, DS3 and OC-3/12/48/96. Id. at 15718. Obviously, not all of these transmission capabilities used the entire capacity of the underlying physical facility. Similarly, the Commission required access to shared transmission facilities between end offices and the tandem switch (id.), which by

[1] See e.g., Bell Atlantic at 7-8; GTE at 18; and U S West at 16-17.

[2] Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, 11 FCC Rcd 15499 (1996) (subsequent history omitted).

definition could not encompass all of the transmission capability of the entire facility over which such transport was provided. Thus, even though the Commission stated there (id. at 15631) that with respect to some elements, the purchaser would "obtain exclusive access to an entire facility," that was not a result of the statutory definition, but rather an exercise of Commission discretion as to which elements should be made available on an unbundled basis. This was made clear in the same paragraph (id., ¶258): "Carriers seeking other elements, especially shared facilities such as common transport, are essentially purchasing access to a functionality of the incumbent's facilities... ."[3]

Bell Atlantic (at 8) makes much of the Commission's rejection, in ¶385 of the Local Competition Order, of a functional, rather than facility-based, definition of the loop element. However, the extensive quote from ¶385 in Bell Atlantic's Comments omits a critical sentence which places the Commission's discussion in context: "According to these parties, this [functional] definition would enable an IXC to purchase a loop element solely for purposes of providing interexchange service." In other words, what was before the Commission was a proposal, not to separate the higher frequency portion of the loop from the analog voice frequencies, but rather to allow IXCs to purchase the voice capabilities of the loop on a shared basis: the IXC presumably would only pay for a portion of the loop costs that were proportional to the use of the loop for long distance calls. Furthermore, the possibility that high speed data services and analog voice services could be provided simultaneously over the same local loop appears not to have been

[3] Sprint is at a loss to understand AT&T's apparent argument (at 17) that unbundling the high-speed data capabilities of a loop is inconsistent with the Commission's policy of defining elements in terms of funtionalities. It would seem clear that the capability of transmitting data within a specified range is a functionality.

known to the Commission when it issued that decision three years ago. Thus, the Commission went on to state in ¶385, id. at 15693,

> In contrast, a definition of a loop element that allows simultaneous access to the loop facility would preclude the provision of certain services in favor of others. For example, carriers wishing to provide solely voice-grade service over a loop would preclude another carrier's provision of a digital service, such as ISDN or ADSL, over that same loop.[833]
>
> [833] Digital services such as ISDN and ADSL occupy the same frequency on a loop as ordinary voice grade services.

It is clear from the foregoing that the Commission did not contemplate in 1996 that the kind of line-sharing here at issue was even possible. Nothing in the Local Competition Order precludes the Commission from altering its definition to reach a different result today in light of the changes in technology that have occurred in the intervening three years.

B. The "Impairment" Criterion in §251(d)(2) Is Not a Bar to Requiring Line-Sharing

Obviously, in making a final determination as to whether to require that spectrum be unbundled for UNE purposes, the Commission will have to apply whatever criteria it adopts in its pending proceedings in CC Docket No. 96-98 to determine whether the absence of line-sharing would "impair" the ability of requesting carriers to offer their services. However, under any reasonable definition of impairment, it is clear that such impairment exists. So long as the ILEC itself has the ability to offer both its traditional monopoly voice service and advanced services (including high speed data and other services) over the same loop, it cannot seriously be argued that a carrier that wishes to compete in the advanced services market is not materially impaired if it has to buy a

separate loop in order to provide its services to the end user. The RBOCs' arguments to the contrary boil down first to assertions that the fact that data CLECs are in the market and growing (for which they rely largely on press releases showing projections of market coverage, rather than hard facts about the number of customers in service) while having to buy entirely separate loops thus far, shows that they are not impaired by the absence of line-sharing. Second, they argue that even if it costs the data CLEC more to buy an entire loop than it costs the ILEC to use the loop for data services on a shared basis, the Supreme Court has ruled that differences in cost do not equate to impairment. Third, they argue that there is no reason why data CLECs cannot buy an entire loop and either offer voice services themselves or team with another CLEC that is interested in the voice market. And fourth, they argue that the ability to offer voice service on a packetized basis over IP or ATM, puts the data CLEC on an equal footing with the ILEC. None of these arguments deserve serious attention.[4]

To begin with, the mere fact that data oriented CLECs – such as Covad, NorthPoint and Rhythms Netconnections – exist and show prospects of growth does not mean that they would not materially benefit from the ability to engage in the same kind of line-sharing that the ILECs themselves are engaging in. If they can grow their business materially faster by the use of shared loops, then clearly the absence of shared loops is a material impairment on their ability to offer their desired services to the public. The comments of COVAD (at 19-22) and NorthPoint (at 6-13) amply document the price

[4] See e.g., Ameritech at 3-5; Bell Atlantic at 9; GTE at 19-25; SBC at 14-17; and U S West at 20-22.

squeeze faced by data CLECs in the absence of line-sharing and the increasing difficulties they face in obtaining second lines into the customers' premises.

The RBOCs' contentions that data CLECs could make arrangements with voice CLECs to line-share, or can offer voice service over packetized data services, are no answer either. There is a paucity of CLECs providing analog voice services to residential and small business customers through their own switches today, and as a result, the ability of a data CLEC to find a voice CLEC with its own analog switches with whom to partner is likely to be only a theoretical, not a realistic, alternative. Moreover, the ability to offer packetized voice does not address the very real possibility that until such offerings gain widespread acceptance in the marketplace, many consumers may be reluctant to give up the analog voice service they obtain from the ILEC. Ultimately, consumers will decide what services they want and which entities they want to provide those services. However, given the long-entrenched incumbency of the ILECs, and the fact that traditional POTS does not require external power,[5] it is reasonable to assume that a substantial number of consumers that may wish to buy high-speed data services, or even packetized voice services for their second or third line, may be reluctant to give up entirely their ILEC-provided analog voice service. For those consumers, competitive data carriers are at a distinct disadvantage vis-à-vis an ILEC if they must buy an entirely separate line for services that the ILEC provides on the same line used for analog voice.

[5] See "AT&T Tests Its Mettle As a Local Phone Firm On Pacific Bell's Turf," Wall Street Journal, July 16, 1999, A1, A8 (customers "hate" back-up battery packs, which are "a constant reminder" of differences from services of ILECs).

The two state regulatory commissions that address the line-sharing issue, as well as the General Services Administration, recognize the impairment that competitive carriers would suffer in the absence of line-sharing, when they compete with ILECs that offer their own voice and data service on a line-shared basis. The California Public Utilities Commission (at 5) observes that today, line-sharing gives the ILEC a "distinct competitive advantage" and argues that to "level the playing field and promote deployment of these advance[d] services, competitors must be able to share the loop and thus take advantage of the same economies that [the ILEC can] in offering xDSL service." Similarly, the Oklahoma Corporation Commission (at 14) "concludes that failure to require line-sharing will leave CLECs severely disadvantaged in the provision of advanced technologies." Finally, GSA states (at 7):

> In many markets, stand-alone data service is uneconomic at the present time. Competition will develop far more rapidly if consumers are not required to acquire a second telephone line for access to digital services. Unless opportunities for line-sharing are available to competitors in these markets, incumbent LECs will emerge as the controlling providers of advanced telecommunications services simply because they control nearly all of the local loop plant.

C. Technical Feasibility, Operational and Administrative Issues Do Not Preclude Line-sharing

The clearest evidence of the lack of technical obstacles to line-sharing is the fact that the ILECs are providing xDSL services on a line-sharing basis with their analog voice services today. To be sure, line-sharing with a separate entity raises additional operational and administrative issues that are not present when the line-sharing is purely internal. However, at least two of the RBOCs have concluded that line-sharing with

another corporate entity is feasible. Thus, in their July 1, 1999 ex parte presentation in CC Docket No. 98-141, SBC and Ameritech propose, in connection with the approval of their pending merger application, to create a separate affiliate to provide xDSL services and to provide line-sharing to that affiliate.[6]

The technical feasibility arguments of the RBOCs are red herrings. Bell Atlantic (at 10-11) points to the fact that ILECs today offer services that occupy higher frequency bands on many lines, such as data over voice, ISDN, etc., that would make sharing on those lines impossible.[7] Sprint does not dispute that this might be the case. But that is beside the point. Ultimately it is for consumers to decide what service they desire and from which carriers to buy them. If an end user is taking ISDN service and does not wish to give up that service in order to have higher speed xDSL services on that same line, then no carrier – neither the ILEC nor a CLEC – will be able to use that particular loop on a line-shared basis. But the bare fact that some customers may be unwilling to give up such existing services does not stand in the way of offering line-shared services to consumers who either do not have such conflicting services today or are willing to forego those services in favor of a new package of services. U S West argues at some length (at 12-16) that certain kinds of xDSL services now used extensively by data CLECs utilize the entire frequency spectrum of the loop and preclude the reservation of certain frequencies for voice services. U S West also argues that by allowing CLECs to use their own xDSL equipment for such services, it is necessary to terminate the loop in the

[6] See Proposed Conditions For FCC Order Approving SBC/Ameritech Merger, at 14-15, 19.

[7] See e.g., Bell Atlantic at 10-11.

CLECs collocation space leaving it to the CLEC to create a separate voice channel for the ILEC and thereby forcing incumbents to buy back voice services created by CLECs.

Sprint acknowledged in its Comments (at 10) that certain varieties of xDSL service are incompatible with line-sharing. But again that does not mean that line-sharing should be prohibited for compatible technologies such as ADSL. Moreover, the fact that some CLECs employ incompatible technologies today does not mean that they would (or could or should) insist on using these same technologies in a line-sharing context. Nor does a CLECs desire to employ its own xDSL equipment necessarily force the ILEC to "buy back" the voice service from the CLEC, as U S West argues. In the typical configuration, the local loop would pass through an ILEC POTS splitter in the ILEC central office with only the higher-frequency data portion of the transmission on that loop being routed from the POTS splitter to the CLEC's DSLAM.

Although line-sharing is clearly technically feasible, issues of possible interference or incompatible technologies do exist. However, the solution is not to prohibit line-sharing altogether. Rather, as Sprint suggested in its Comments (at 9), the issue of establishing dividing lines between the analog voice and high-speed portions of the loop should to referred in the first instance to a body such as ANSI to develop a consensus industry standard.

Sprint also does not deny that there are substantial administrative and operational issues that will have to be addressed in order to facilitate line-sharing. However, these issues relate more to the costs and time needed to implement line-sharing than whether or not line-sharing is technically feasible. Sprint suggests that the Commission make clear

that ultimately the ILEC is the appropriate entity to handle the spectrum management issues but that CLECs who wish to use only a portion of the loop on a shared basis also have responsibilities to cooperate with the ILEC on matters of testing, maintenance and repair, and must take responsibility for interference problems that may be caused by their equipment. Beyond delineation of these basic responsibilities, the Commission should set a deadline (Sprint suggested one year from the issuance of an order in this proceeding) for the ILECs to undertake the necessary work to develop procedures and modify OSS systems so that line-sharing can be offered to other carriers.

D. The Policy Arguments Against Line-sharing are Unavailing

The RBOCs raise a litany of policy arguments against line-sharing. Bell Atlantic (at 2-3) and GTE (at 27-28) argue that line-sharing would retard the development of local competition for voice services to the residential market. Bell Atlantic contends that local carriers today are often required to offer local voice services at below-cost rates and that competing carriers will have no incentive to provide such services if instead they can offer more profitable advanced services by hitching a "free ride" on the incumbent carriers' voice services. Bell Atlantic is setting up a false dichotomy. To the extent that voice services are provided by ILECs at below-cost rates today, would-be entrants have no incentive to compete for the provision of such services, whether or not they wish to enter the high-speed data market. And carriers choosing to enter the latter market would not be getting a "free ride" any more than the ILEC itself would when it provides advanced services on the same loop as analog voice service. If Bell Atlantic is suggesting that ILECs should have exclusive use of line-sharing so that they can use more profitable

advanced services to cross-subsidize voice services, this is the very sort of implicit subsidy that §254 of the Act prohibits.[8] If local rates are non-compensatory as a general matter, that is an issue that must be dealt with by state regulatory authorities rather than by market-dividing schemes that give ILECs a competitive edge in the offering of advanced services.

It is also not true that line-sharing would deter CLECs from offering voice services. Cf. Bell Atlantic at 3. With the advent of technologies, such as that used in Sprint ION, that permit high-quality packet switched voice service, carriers utilizing line-sharing may offer voice services as part of their package of advanced services. As discussed above, however, line-sharing is most likely to be used in instances where consumers, for whatever reason, want to retain the analog voice service of the ILEC; but these consumers may be able to obtain packetized voice services from their data carrier as well, to meet their needs for a second or third voice line.

The RBOCs also argue that line-sharing would deter both CLECs and ILECs from investing in facilities-based provision of advanced services.[9] As explained at length in Sprint's May 26, 1999 Comments on the UNE remand issues in CC Docket No. 96-98, Sprint, for one, would always prefer to compete on a facilities basis and turns to an ILEC for UNEs only as a last resort. However, the 1996 amendments to the Communications Act contemplate three avenues of competitive entry – facilities-based, UNEs and resale – and every CLEC must consider whatever strategy or combination of strategies produces

[8] See AT&T Corp. v. Iowa Utilities Board, 119 S.Ct. 721, 737 (1999).

[9] See e.g., Bell Atlantic at 4; and GTE at 26-27.

the best long run results. If the ILECs' initiation of advanced services on a line-shared basis drives the market in that direction, then as long as customers seek to retain their ILEC voice services, CLECs will have to respond accordingly. It may be noted that other RBOCs argue against line-sharing on the basis that it will be too costly for CLECs to purchase the line shared UNE, in relation to the costs of simply buying an entire loop UNE instead.[10] The fact is that no one knows today what the total cost of the shared loop UNE will be. However, if it turns out that the shared loop UNE is the most economical way to offer advanced services in competition with ILECs that engage in line-sharing themselves, then advanced services competition will be deterred, rather than promoted, by making the shared loop alternative available only to the ILECs. As for the argument that mandatory line-sharing would discourage ILECs from investing in advanced services, this is more an attack on the TELRIC standard itself rather than on line-sharing as such, and one that was made and lost two years ago when the Commission issued its Local Competition Order.[11]

Yet another argument is that line-sharing will deter ILECs from investing in new technologies (such as replacing copper with fiber),[12] or would preclude ILECs from developing innovative services that use the higher frequency portion of a loop.[13] It is not clear to Sprint why there would be any deterrent to ILEC investment in new technologies, such as replacing copper loops with fiber facilities. If anything, the higher capacity of

[10] See SBC at 21-23.

[11] See Local Competition Order, supra, 11 FCC Rcd at 15823-25, 15844-72.

[12] See e.g., BellSouth at 14.

[13] See e.g., SBC at 18-19; AT&T at 20.

fiber should facilitate, rather than impede, shared use of the facility. Moreover, in this regard, if an ILEC that utilizes loop sharing decides to replace its copper plant with fiber, presumably the ILEC will develop a means of accommodating its customers' desire for analog voice and high speed data on the same facility. If it is able to do so for itself, then it should be required to do so for CLECs as well. As for inhibiting development of new services, SBC fails to appreciate that in the competitive market that is the desired goal of the 1996 Act, consumers will have the ultimate choice over services and service providers. If the ILEC and a CLEC both provide different services to the same consumer over the same loop on a shared basis, and the ILEC develops a superior service that requires the entire loop, the consumer will be able to choose that service and the ILEC will have the right to supplant the CLEC's partial use of the loop.

Another argument against line-sharing is that its desirability may be a short term phenomenon that will soon be overtaken by technological change. Specifically, SBC (at 19-20) points to the ability to provide both voice and data services over packet switching. If SBC is right and there turns out to be little demand for line-sharing, then there will be little harm in having required line-sharing other than the relatively modest fixed costs involved in developing procedures and processes to implement it. If, on the other hand, consumers continue to demand switched analog voice service alongside their packetized services, then no matter what new service offerings ILECs or CLECs develop, line-sharing may be the most economical means of providing consumers the services that they want.

Clearly, despite all the efforts of the opponents of line-sharing to concoct policy arguments against it, the very factors demonstrating that CLECs would be materially impaired by their inability to obtain line-sharing from LECs who themselves engage in line-sharing constitute a compelling pro-competitive public policy rationale for requiring line-sharing.

E. Cost Allocation Issues

Yet another ground given for opposing line is the alleged difficulty of allocating the loop costs between the voice and the high frequency services.[14] BellSouth, in this regard, baldly argues (at 25) that CLECs are not entitled to the same economies of scope as ILECs. Sprint thought this issue was laid to rest in the Local Competition Order, where the Commission specifically found that new entrants are entitled to share in the economies of scope and scale of the ILECs. See Local Competition Order, supra, 11 FCC Rcd at 15618, 15660. See also the Third Reconsideration Order in that docket, 12 FCC Rcd 12460, 12482 (1997) (subsequent history omitted) ("Requiring transport facilities to be made available on a shared basis will assure that such economies are passed on to competitive carriers") and id., at 12462.

Normally Sprint would agree that allocating the cost of the loop between two services that share a portion of the transmission capacity of the loop would be difficult and necessarily arbitrary. However, the ILECs have greatly simplified this task by allocating no loop costs to their ADSL services. Given their own treatment of the cost allocation issue, there is no reason why the Commission should allocate any loop costs to

[14] See e.g., AT&T at 19; BellSouth at 24-27; U S West at 25-27.

the shared loop UNE. Sprint's position in this regard is supported by several other competitive carriers.[15] Although some parties argue that a portion of the loop costs should be allocated to the high speed data portion of the loop both for purposes of line-sharing and the ILECs' own retail service offerings,[16] it would be difficult to undertake such an allocation without implicating local service pricing, the access charge regime and universal service mechanisms, as Sprint pointed out in its initial Comments (at 14).

F. No Service Restrictions Should Be Imposed on the Use of a Shared Loop

Finally, Sprint wishes to respond briefly to the overreaching pleas by USTA (at 25) that "under no circumstances" should CLECs be allowed to provide voice services over the data portion of a shared loop, and by SBC (at 28) that line-sharing be limited to residential customers. USTA argues that the premise that loop sharing will speed introduction of "advanced services" is turned on its head if the CLEC uses the loop in part for voice service. However, it is USTA that is turning logic – and the statute – on its head. USTA's argument overlooks the fact that advanced services are defined in §706 of the 1996 Act to include "voice" and well as data and other services. USTA also ignores the fact that §251(c)(3) permits a carrier requesting unbundled access to use such access for the provision of "a" telecommunications service without limitation. It would clearly be impermissible under the statute for the Commission to even consider placing the sort of restriction that USTA seeks. The same is true for SBC's request to restrict line-sharing to residential customers. Nothing in the statute warrants such a restriction, and the ILECs

[15] See e.g., COVAD at 39-40; MCI WorldCom at 12-13; NorthPoint at 28; and Rhythms at 12-14.

[16] See e.g., ALTS at 17-19; and Intermedia at 4.

offering advanced services today on a line-shared basis do not restrict their offerings to residential customers.

II. SPECTRUM COMPATIBILITY – LONG TERM STANDARDS AND PRACTICES

With respect to spectrum compatibility issues, Sprint will confine its reply largely to the importance of (1) developing standards for new technologies before they are introduced into the marketplace, and (2) binder group management.

A. Industry Standards For New Technologies Should Be Developed Before Their Introduction In The Network

In its comments, Sprint endorsed the T1E1.4 working group of ANSI as the appropriate body to develop spectrum compatibility standards. Sprint acknowledged that this process inherently takes time, but it does not restrict deployment of new technologies that otherwise would not harm the network. Sprint believes that without following the accepted industry standard for introducing new technologies into the network, every service from any carrier could be put at risk.

Both NorthPoint and Covad describe similar processes for introducing new technologies that seem to allow deployment without thorough testing of their interference potential. Thus, NorthPoint (at 35-37) would define an "established technology," which it argues should be presumed acceptable for deployment, to include any technology successfully deployed in any jurisdiction for at least six months, and would require ILECs to allow deployment of any new technology for up to six months on a "test and see" basis. Covad similarly proposes (at 51) allowing deployment of a new technology in up to 5,000 subscriber lines in 50 central offices for as long as a year, so long as the

carrier first affirms that it does not "appear" to significantly degrade the network. These approaches to technology deployment are fraught with dangers to the public network since they do not ensure that the new technologies would work on a long-term basis. Sprint is supportive of competitive progress in the industry, but strongly advocates adequate testing and field trials as opposed to an accelerated introduction as described above.

A technology that may have been successfully deployed in a limited context (e.g., in very short loops) may produce far more degradation in other settings (e.g., loops of 10,000 feet or more). Thus, to enshrine such a technology as "established" and presumed to be fit for general deployment could cause harmful interference to other users. Similarly, allowing any carrier the unlimited right to deploy any new technology anywhere for a period of up to six months, or even on a more limited basis for up to a year, could have similar serious effects on other users of the network. Surely the Commission would not want service to a hospital or a public safety agency taken down by an experimenting carrier's interference.

Rather, new technologies must be carefully modeled mathematically to uncover likely interference possibilities. Such technologies also must be tested under a variety of conditions through laboratory tests and controlled field trials, before they are allowed to be deployed on a widespread basis. Such testing, if it is to be effective, must necessarily include "worst case" scenarios, so that the full potential for interference of a new technology can be understood and addressed. On the other hand, the individual ILECs should not be allowed to pursue testing and deployment practices that are

anticompetitive. For that reason, Sprint has proposed formation of an ad hoc industry body to develop national, competitively neutral spectrum management policies.

The related frustrations expressed by NorthPoint (at 43-44) that at the ILECs' urging, T1E1.4 protects ADSL service from other xDSL services used by data CLECs, particularly SDSL,[17] overlooks the importance of ensuring quality of service at high data rates. Sprint offers both symmetrical and asymmetrical DSL products, and each has its place in the market, with SDSL tending to be more suitable for business users and ADSL better-equipped to meet the needs of residential customers. Although SDSL is generally unaffected by ADSL, the reverse is not true. ADSL is particularly subject to interference from SDSL in the upstream direction. However, NorthPoint has again identified a need for national standards. As a carrier that provisions numerous technologies, Sprint is strongly in favor of national standards which would be most efficaciously developed through an ad hoc body as proposed by Sprint.

Covad, too, takes a rather non-standard-based approach to interference. It argues (at 48-49), in effect, that all DSL technologies cause interference with other technologies, and as long as some "tolerable" noise levels are not exceeded, all carriers should simply learn to live with this interference in designing their own services and no carrier should be "blamed" for causing interference to another carrier's customers. This approach is inconsistent with the concept of advanced services, which, by definition in §706, are to be "high-quality" services. Without national standards, this approach would let spectral "bullies" ride roughshod over other users with impunity. Instead, not only sound national

[17] See also, Covad at 45-46.

technical standards but also sound national deployment practices are needed to ensure that a variety of technologies can be implemented and managed in a fashion consistent with ensuring the high quality of service that has been the hallmark of this nation's network. On the other hand, CLECs must be treated fairly by ILECs with regard to deployment of new technologies and need to know what the ground rules are. In this regard, CLECs will be much better off with industry standards for spectrum management than having to endure each ILEC's "standard of the month" process.

If, as Sprint, Covad and NorthPoint all agree, line-sharing UNEs are required, Covad and NorthPoint are likely to make greater use of ADSL in the future than they do today, and it is in the interests of all concerned to ensure that the quality of ADSL service is no adversely affected by interference from SDSL or other "flavors" of xDSL.

B. Binder Group Management Is Necessary To Minimize Interference

In its comments, Sprint strongly endorsed binder group management as the best approach to spectrum management, particularly in the feeder cable close to the ILEC central office, where potential interference is greatest, and recommended that different technologies be segregated in separate binder groups to minimize cross-interference. With Commission direction, Sprint supports the need for national standards to promote non-discriminatory binder group management.

Bell Atlantic, Covad and Rhythms object to binder group management for reasons that ultimately are misplaced. Bell Atlantic (at 19-20) and Rhythms (at 24) assert that binder group management is unnecessary because the "worst case" scenarios on which the power spectral density masks will be based in the new standard will ensure that new

technologies will be able to coexist with other services. However, the worst-case analyses in fact assume that there will be deployment restrictions, and those restrictions are the basis for binder group management. Furthermore, defining power spectral density masks depends also on defining the types and numbers of interfering technologies. Thus, if these "worst case" analyses denote or connote deployment restrictions for known and tested technologies in what Bell Atlantic calls standardized analytical methods, this is all the more of an argument for binder group management. Quality levels with existing technologies can still be unpredictable. For example, HDSL and its SDSL derivatives negatively affect upstream ADSL. ADSL-based Sprint ION service requires significant upstream bandwidth, and Bell Atlantic's standard analytical method is not robust enough to ensure needed quality. Hence the need for binder group management.

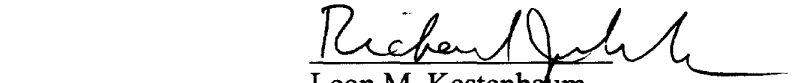
Covad, though supporting binder group management in principle, expresses concerns that in practice most ILECs will limit CLEC deployment of DSL services by placing binder groups "off-limits" for such services, reserve "clean" binder group for their own services and relegate CLECs to "dirty" binder groups. Covad Comments at 45-46.[18] Obviously, ILECs need to employ transparent and nondiscriminatory binder group management practices. Even among the ILECs who are proponents of binder group management there are significant differences in how it is administered, thus affecting the availability of facilities for CLECs. Policies and processes must be established to quickly resolve this issue, to ensure long-term network integrity. To this end, Sprint (at 5) recommended that a national ad hoc industry forum, composed of ILECs, CLECs and

[18] Rhythms expresses similar concerns at 25-26.

manufacturers, be convened to develop policies to be employed by all ILECs and facilities-based CLECs. In the meantime, Sprint's own binder group management practices are intended to treat CLECs at parity with the Sprint ILECs, and to monitor the services deployed in each binder group for the protection of the service integrity of the CLEC as well as the ILEC. If the Commission were to prohibit binder group management, it would invite a spectral free-for-all among carriers that would result in degradation of service quality to the detriment of consumers.

Respectfully submitted,

SPRINT CORPORATION



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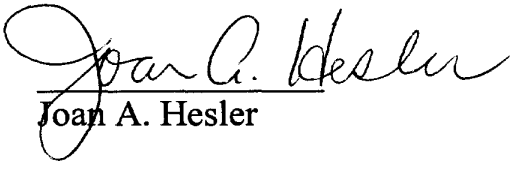
July 22, 1999

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing document in CC Docket No. 98-147 was Hand Delivered or sent by United States first-class mail, postage prepaid, on this the 22nd day of July, 1999 to the parties listed below.



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